Assemble + BIM 360: Better Together

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About the speaker

Nathaniel Coombs

Nate joined Assemble Systems over two years ago after finishing his studies at the University of Vermont, graduating with a B.S. in Civil Engineering with a focus in structures. He joined the team as their first dedicated application engineer, and now leads the Assemble team of application engineers which has continued to grow since starting with Assemble. Outside of leading Assemble's application engineering team, Nate is responsible for technical implementation and support for Assemble's largest accounts, while also leading the international expansion of the product since the acquisition by Autodesk. Nate currently lives in Boston, Massachusetts and enjoys photography in his free time.

Autodesk Construction Solutions

Deliver a comprehensive, integrated platform that seamlessly connects the office, the trailer, and the field.

DESIGN

DESIGN COLLABORATION

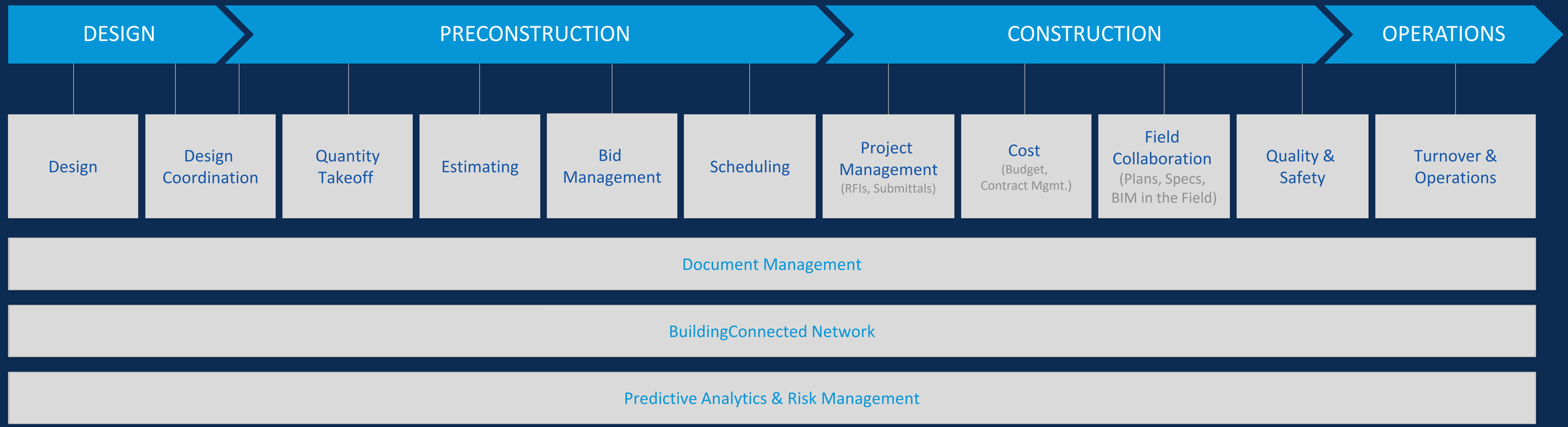
PRECONSTRUCTION

CONSTRUCTION

TURNOVER & OPERATIONS

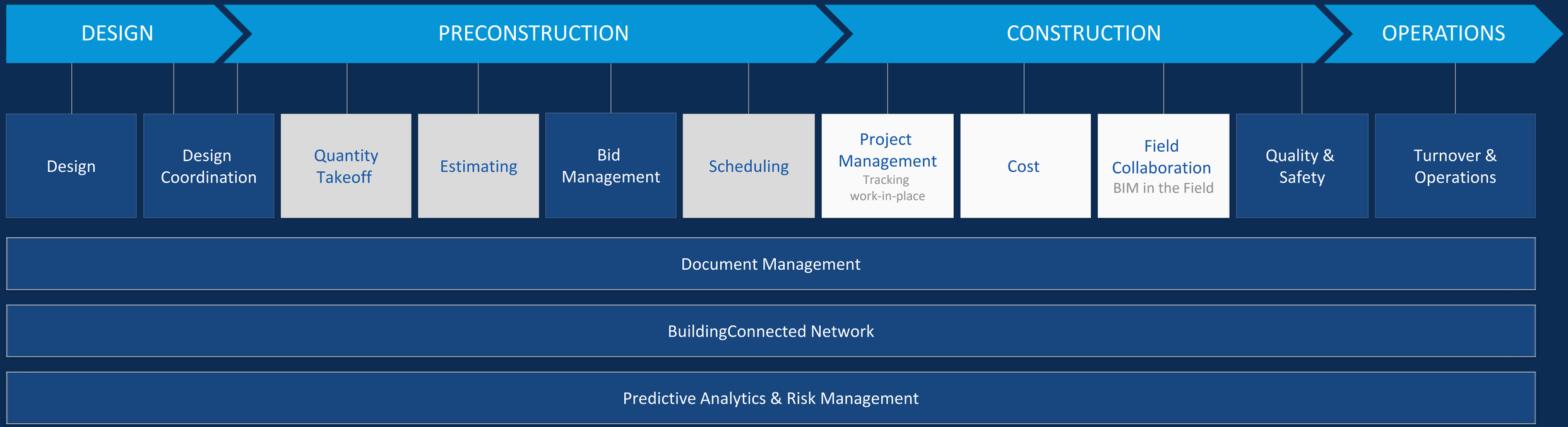
Autodesk Construction Portfolio

assemble BUILDINGCONNECTED BIM 360 PlanGrid



Autodesk Construction Portfolio

assemble



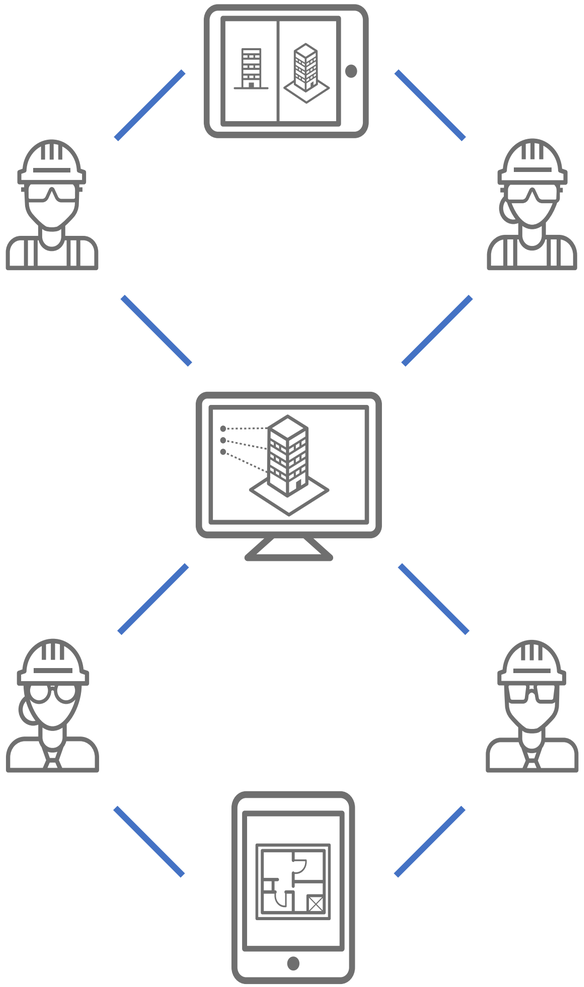
Assemble: BIM Data and Quantity Management

Making “I” in BIM, ready for use in Preconstruction

- Change Analysis
- Conditioned Models
- Model Quantification
- Iterative Precon Estimating

- Project Sequencing
- Access Models & Views
- BIM 360 Integration
- Winning at the Interview

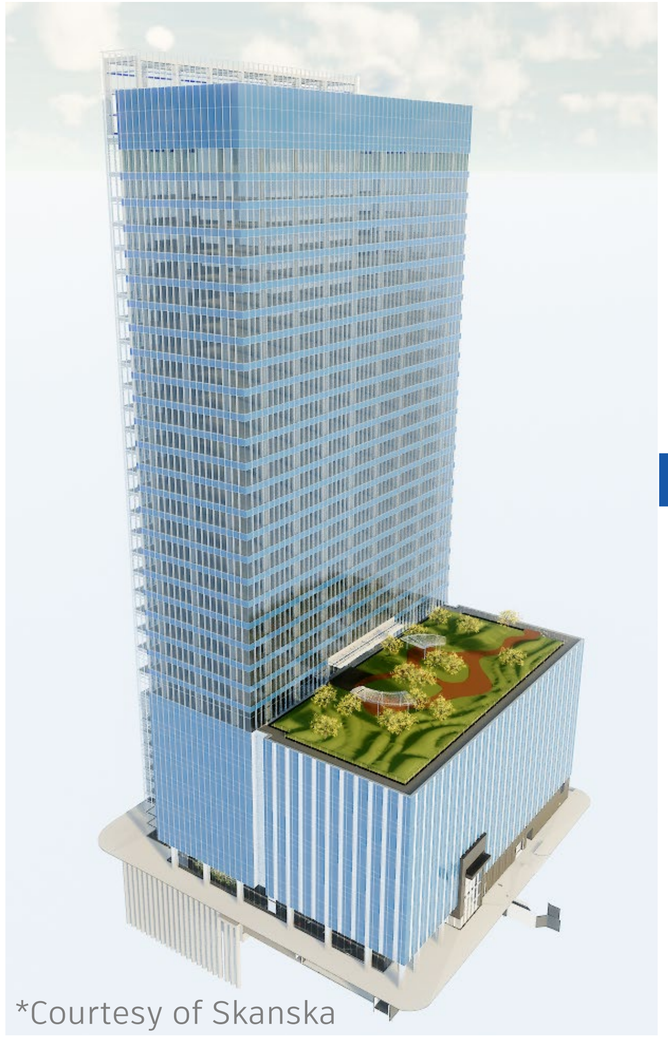
Model Based Data Engagement



Why Assemble?

Assemble Unlocks & Enriches the “I” in BIM

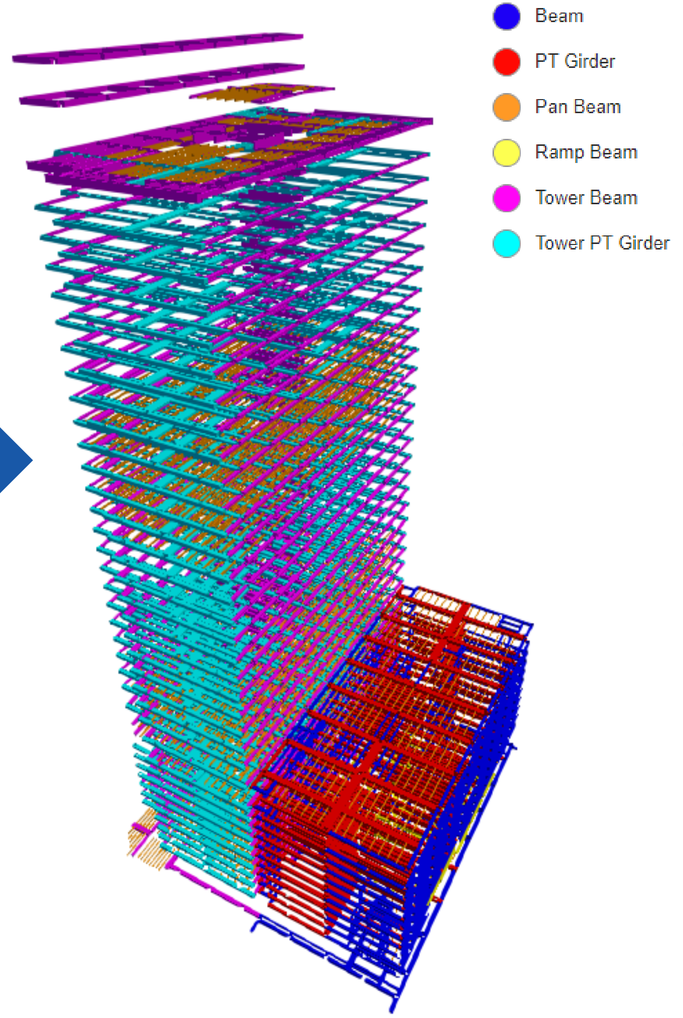
Design Model



*Courtesy of Skanska

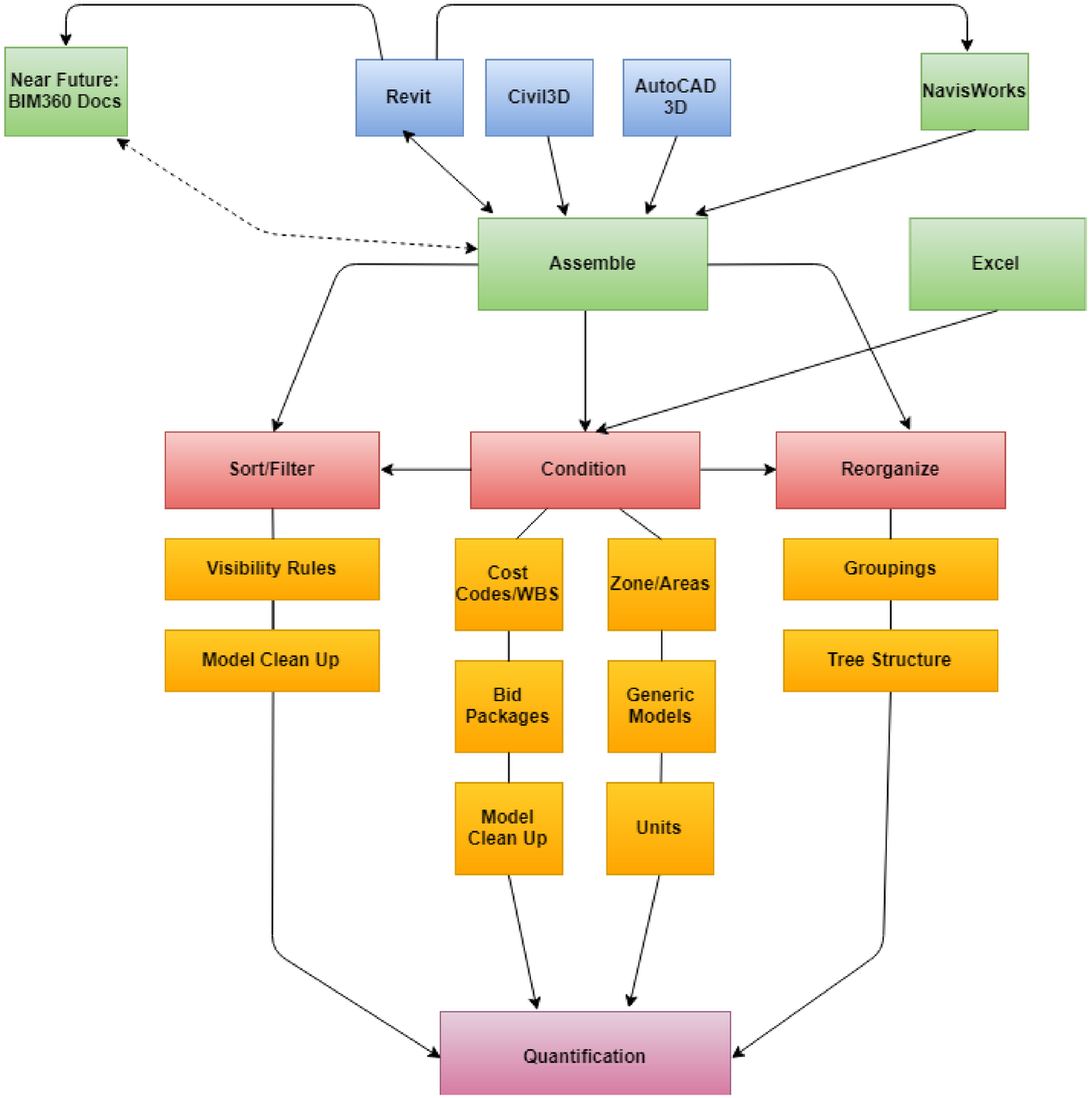
Model Conditioning

Construction Model

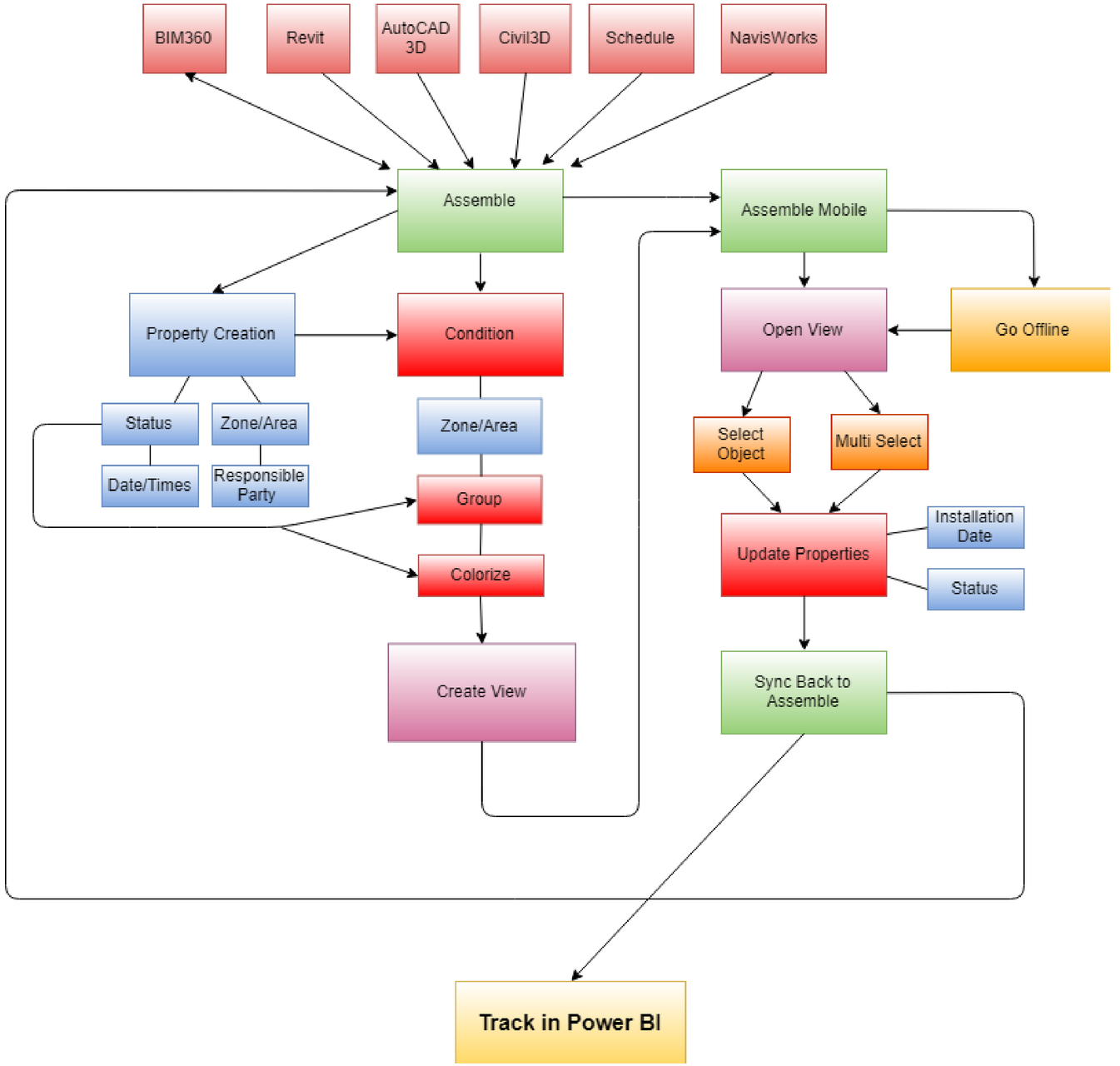


- Work/Location Breakdown
- Quantity Takeoff
- Estimate
- Work in Place
- Schedule

Key Workflow: Quantification

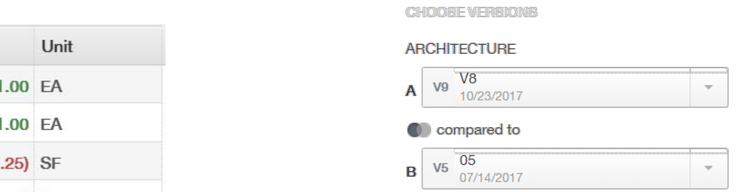


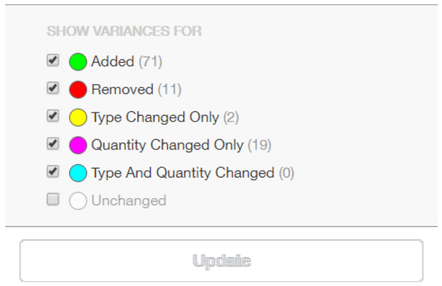
Key Workflow: Tracking Work in Place

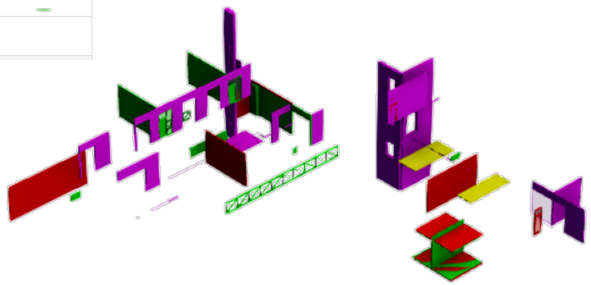


Key Workflow: Change Management

Name	Model Name	A	B	Variance	Unit
Air Terminals	ARCHITECTU...	1	0	1.00	EA
Air Terminals : Return Grille - Rectangular - Hosted : Stan...	ARCHITECTU...	1	0	1.00	EA
Ceilings	ARCHITECTU...	570.24	617.50	(47.25)	SF
Ceilings : Compound Ceiling : Acoustic Panel System 24 ...	ARCHITECTU...	168.00	227.25	(59.25)	SF
Ceilings : Compound Ceiling : Acoustic Panel System 24 ...	ARCHITECTU...	252.00		252.00	SF
Ceilings : Compound Ceiling : Generic 4"	ARCHITECTU...		252.00	(252.00)	SF
Ceilings : Compound Ceiling : Perforated Panel System (...	ARCHITECTU...	150.24	138.24	12.00	SF
Communication Devices	ARCHITECTU...	12	0	12.00	EA
Communication Devices : Display-LCD-Panasonic-Stand...	ARCHITECTU...	10	0	10.00	EA
Communication Devices : Display-LCD-Panasonic-Stand...	ARCHITECTU...	2	0	2.00	EA
Doors	ARCHITECTU...	2	2	0.00	EA
Doors : Door_Single_Parametric Transom : B1_3'-4"x9'-6...	ARCHITECTU...	0	2	(2.00)	EA
Doors : Door_Single_Parametric Transom_Sidelite : D_5'-...	ARCHITECTU...	2	0	2.00	EA
Floors	ARCHITECTU...	239.63	454.51	(214.88)	SF
Floors : Floor : Concrete Pavers	ARCHITECTU...		454.51	(454.51)	SF
Floors : Floor : FIN_CARPET_CP2	ARCHITECTU...	239.63		239.63	SF



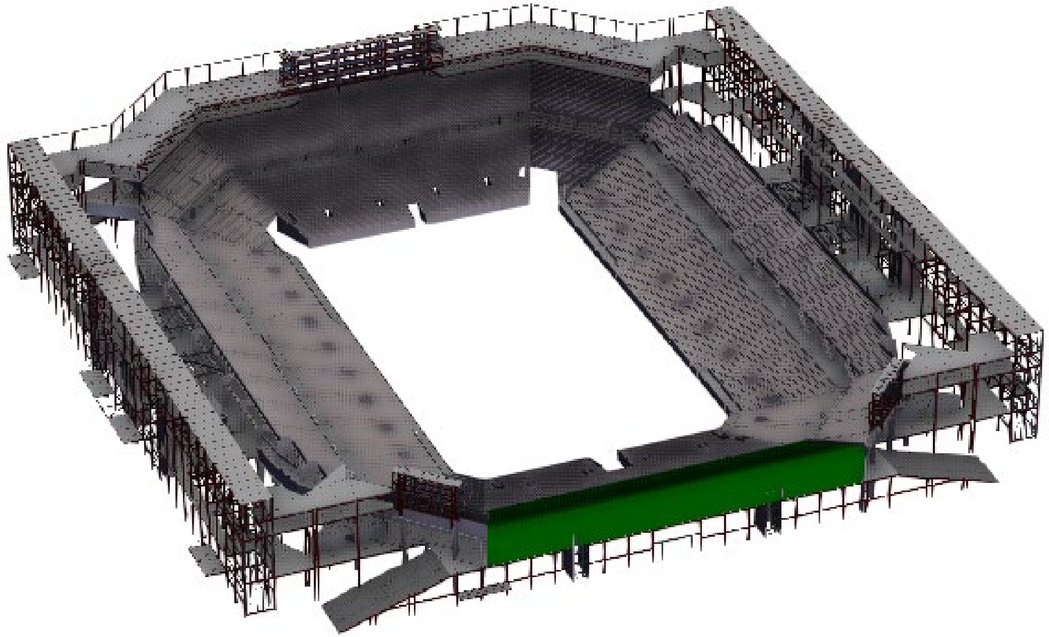


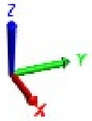


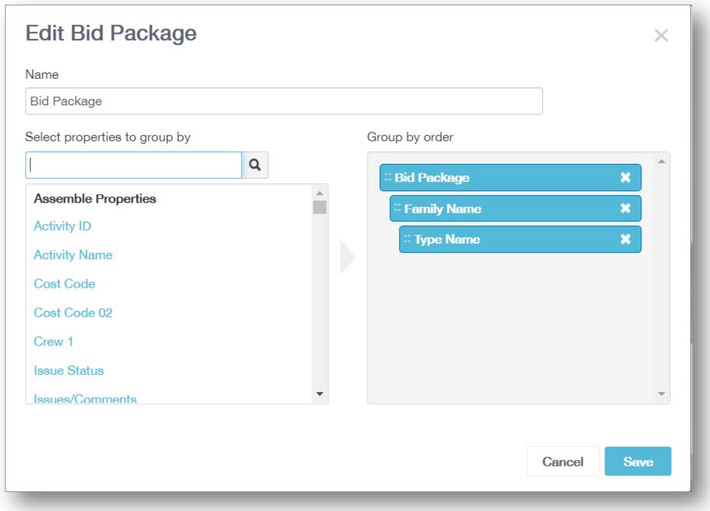
Key Functionality: Group & Organize

Group by: Bid Package | Columns | $ Estimate | Import/Export

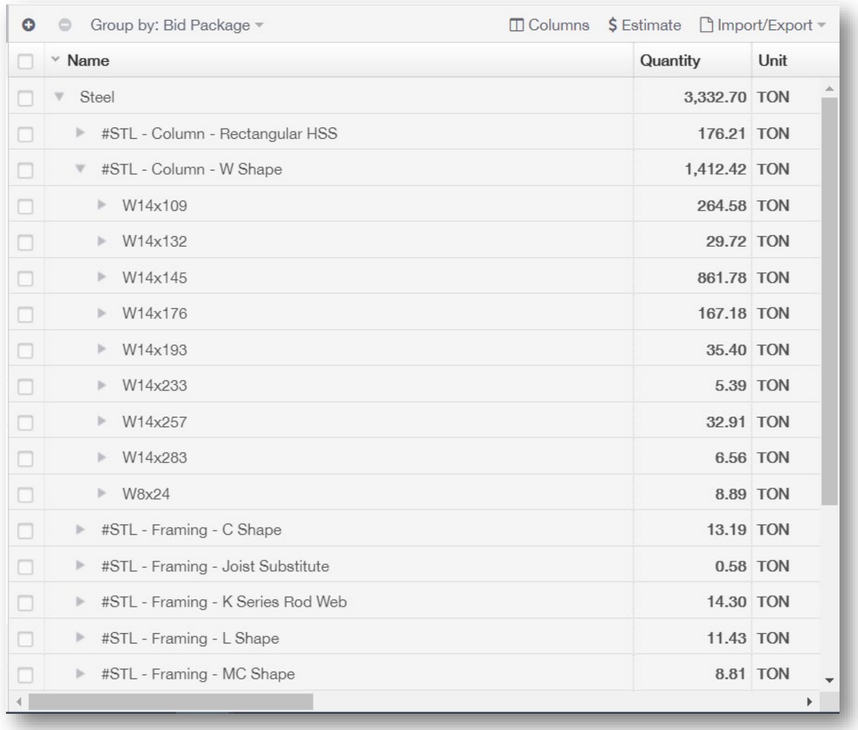
Name	Quantity	Unit	Model Name	Count (EA)	Area (A
Concrete	22,568.53	CY	S07-12006-01...	4,408	
Masonry	70,102.94	SF	S07-12006-01...	491	
Misc			S07-12006-01...	856	
Steel	3,332.70	TON	S07-12006-01...	5,469	
#STL - Column - Rectangular HSS	176.21	TON	S07-12006-01...	400	
#STL - Column - W Shape	1,412.42	TON	S07-12006-01...	539	
W14x109	264.58	TON	S07-12006-01...	108	
W14x132	29.72	TON	S07-12006-01...	6	
W14x145	861.78	TON	S07-12006-01...	330	
W14x176	167.18	TON	S07-12006-01...	51	
W14x193	35.40	TON	S07-12006-01...	10	
W14x233	5.39	TON	S07-12006-01...	2	
W14x257	32.91	TON	S07-12006-01...	8	
W14x283	6.56	TON	S07-12006-01...	2	
W8x24	8.89	TON	S07-12006-01...	22	
#STL - Framing - C Shape	13.19	TON	S07-12006-01...	150	
#STL - Framing - Joist Substitute	0.58	TON	S07-12006-01...	19	

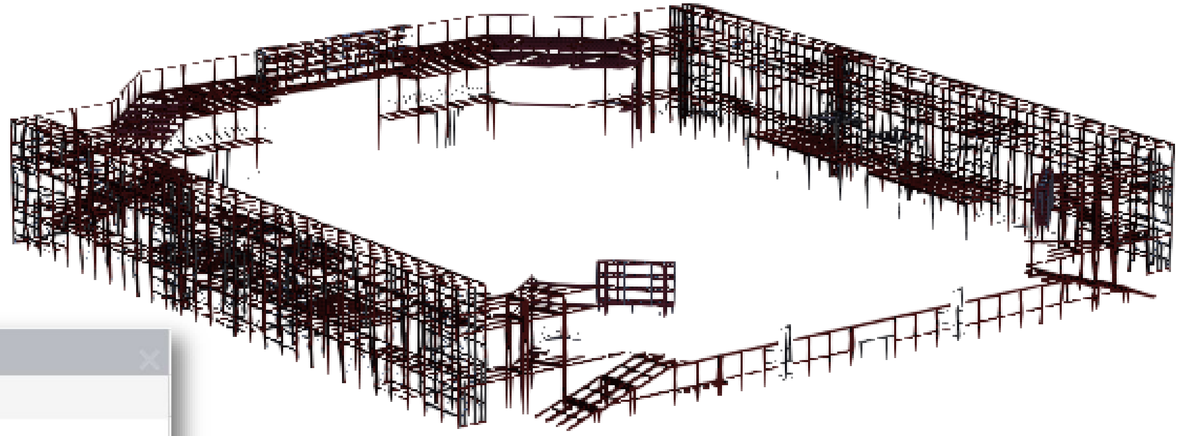


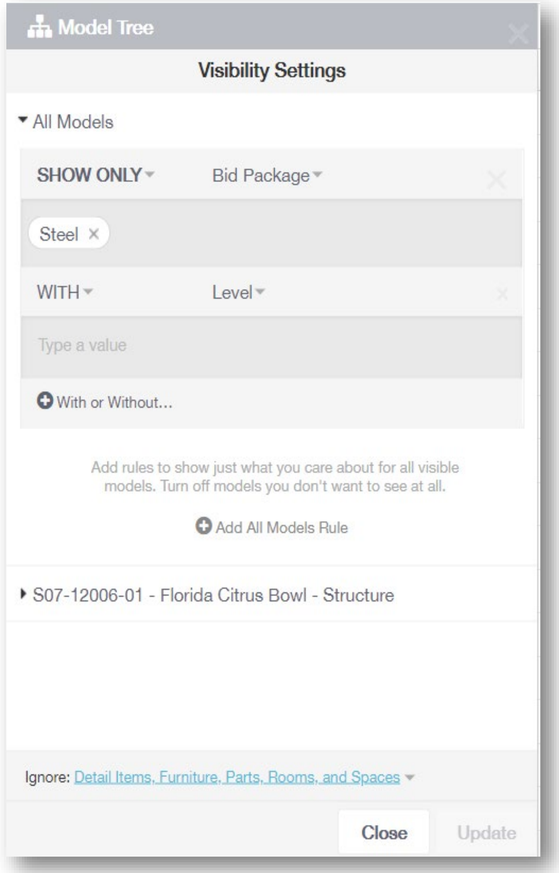




Key Functionality: Sorting & Filtering

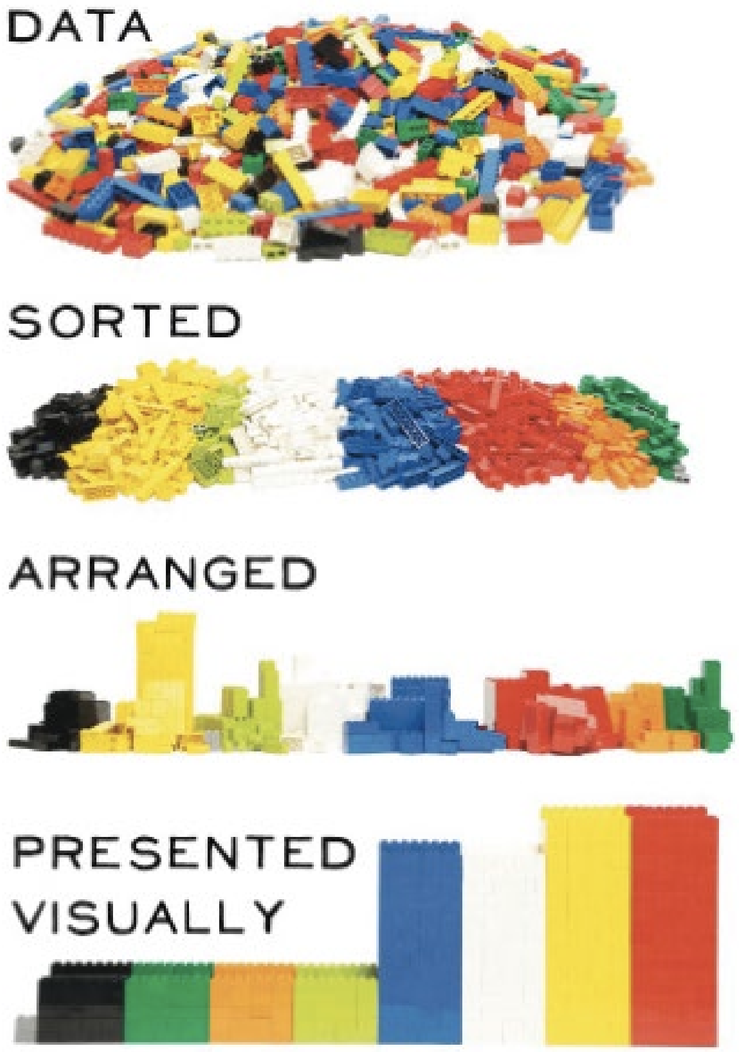






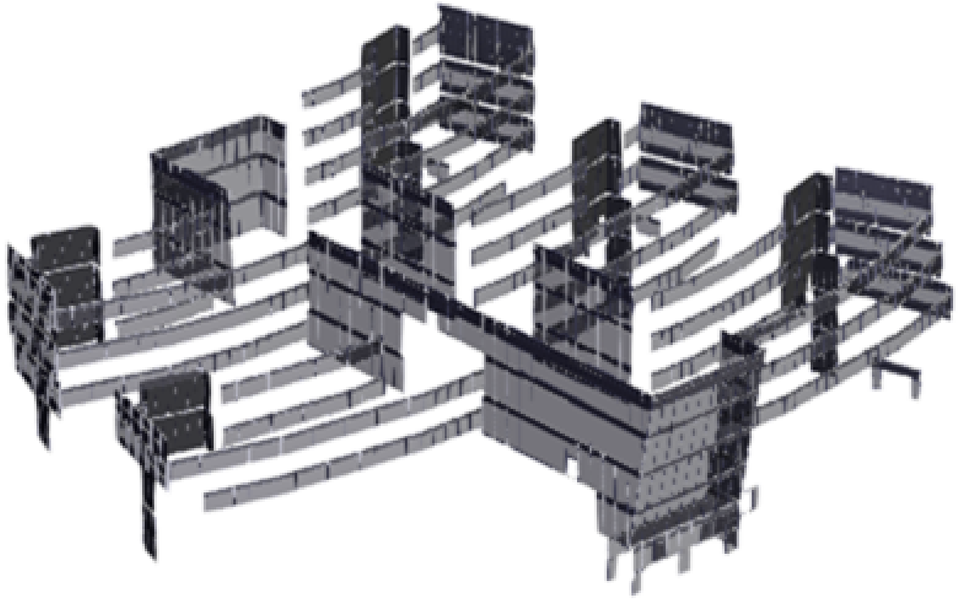
Why Stop There?

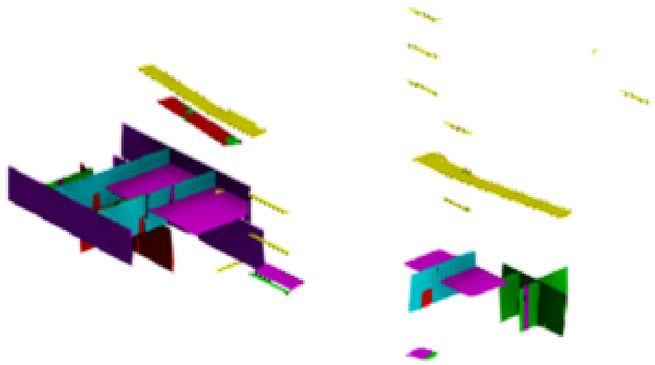
- **Schedule Data**
  - Through Microsoft Excel or Direct From Oracle P6
- **Report Data through Microsoft Power BI**
- **Connect to BIM360**
  - Document Tagging
  - Issue Tracking/Management
  - Cost
- **Push to Estimating Systems**
  - Sage Estimating
  - Microsoft Excel

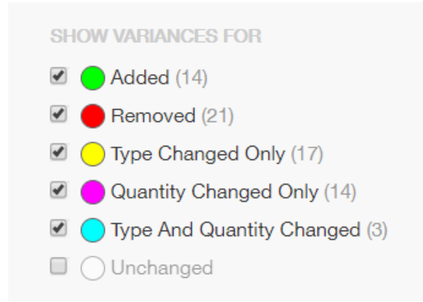


IMC Construction: QTO, Change Management, and Historic Cost Analysis

- **3D Quantification of Model Objects**
  - Curtain systems and Skins
  - Seeing up to 50% time savings when compared against conventional methods
- **Tracking Design Updates**
  - Quickly Identify changes to the model and quantities
  - Track design trends of unusual changes
- **Historic Cost Analysis**
  - Historic cost data used to forecast costs for future bids and estimates
  - Templates for Healthcare, MF Residential, etc







IMC CONSTRUCTION

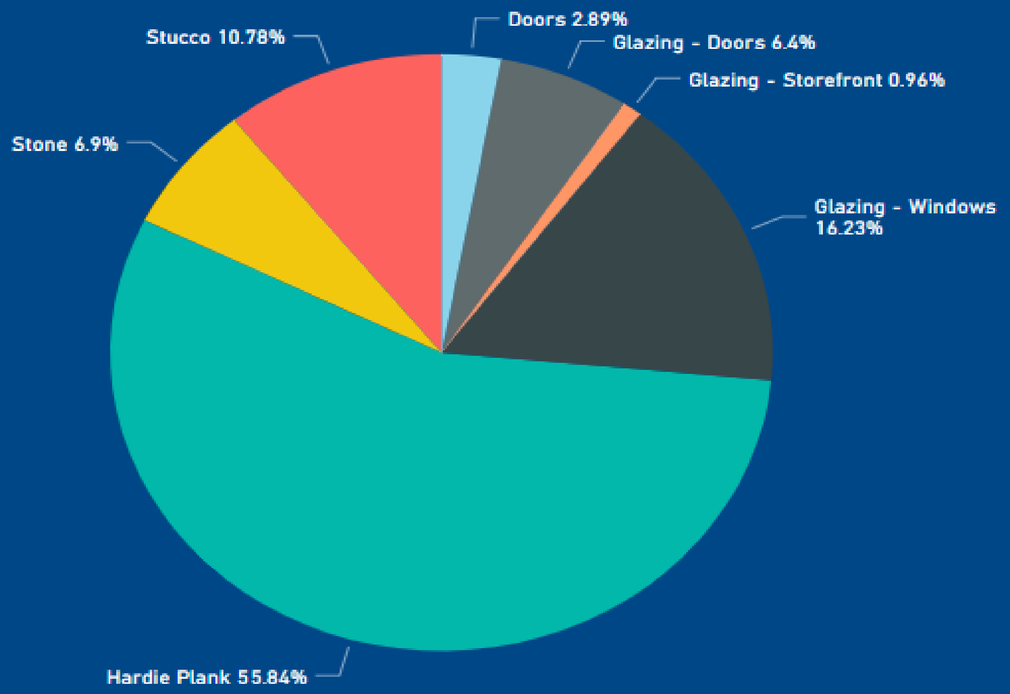
15.020 - AP Station Square

EXTERIOR FACADE - TARGET VALUE DESIGN

Current Facade Material Breakdown

Cladding Classification IMC

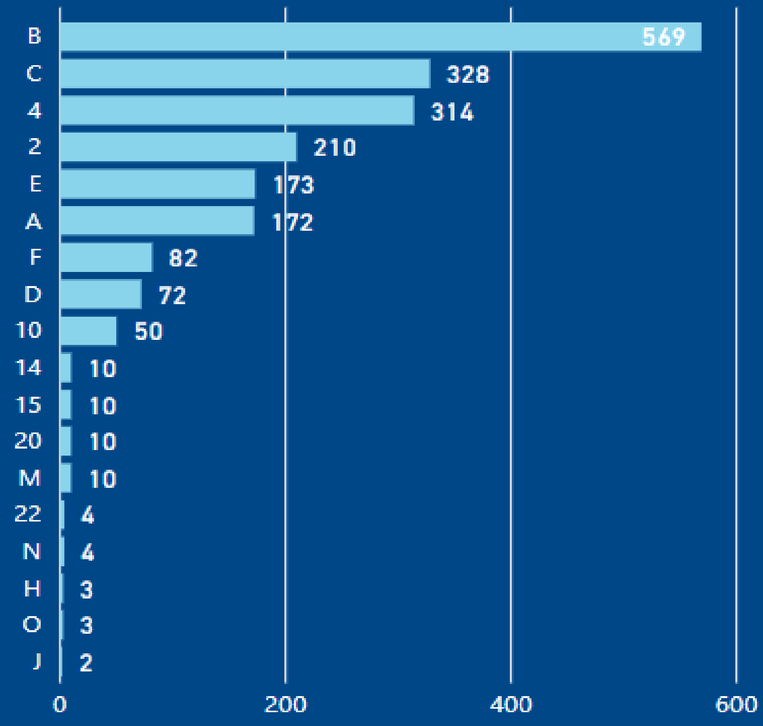
- Doors
- Glazing - Doors
- Glazing - Storefront
- Glazing - Windows
- Hardie Plank
- Stone
- Stucco



Model Version Histroy

Model Name	Model Version	Comments
Architecture	v1 | 171213	SD Budget
Architecture	v2 | 171214	SD Updated
Architecture	v3 | 180413	DD
Architecture	v4 | 180507	DD Revisions
Architecture	v5 | 180801	Permit Set
Architecture	v6 | 180817	Issued for Bidding

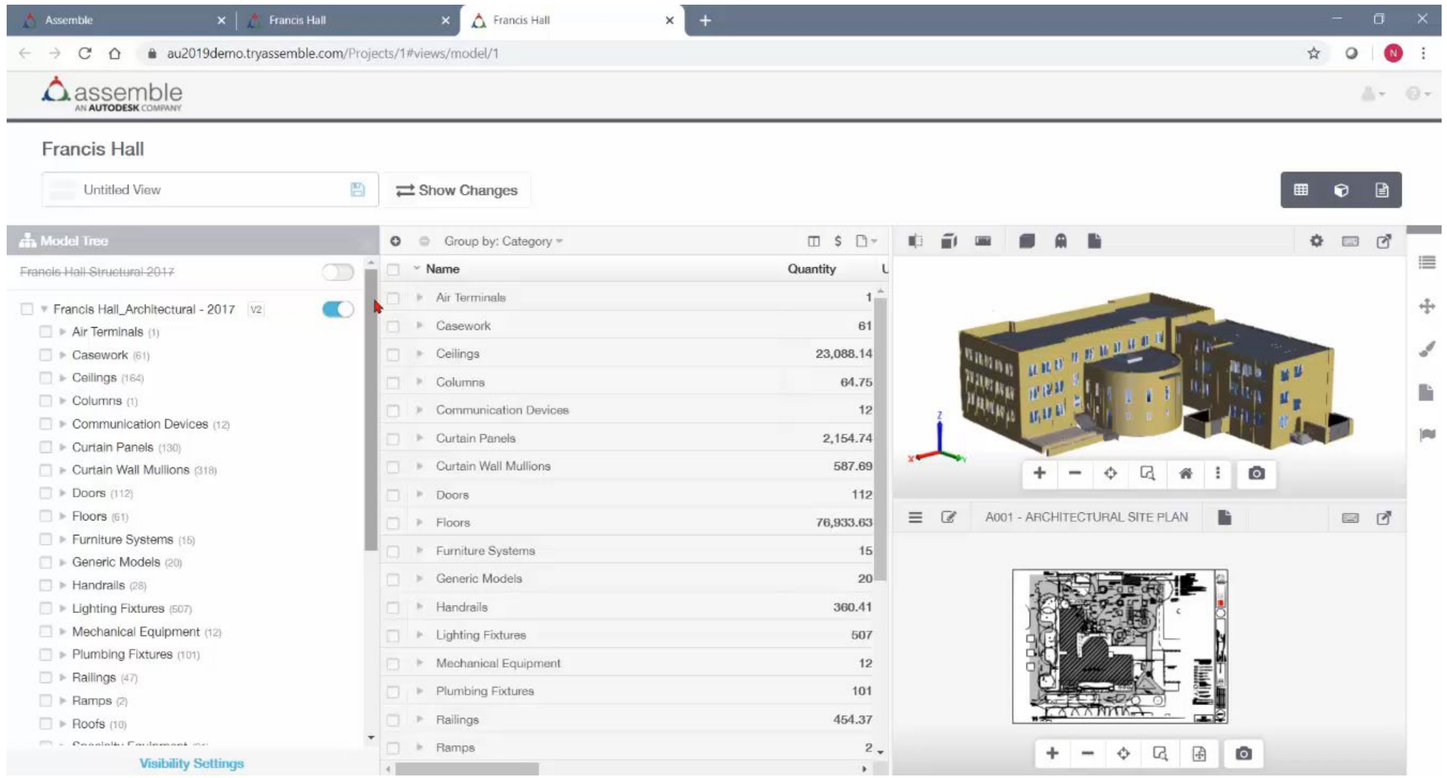
Current Window Count by Type Mark



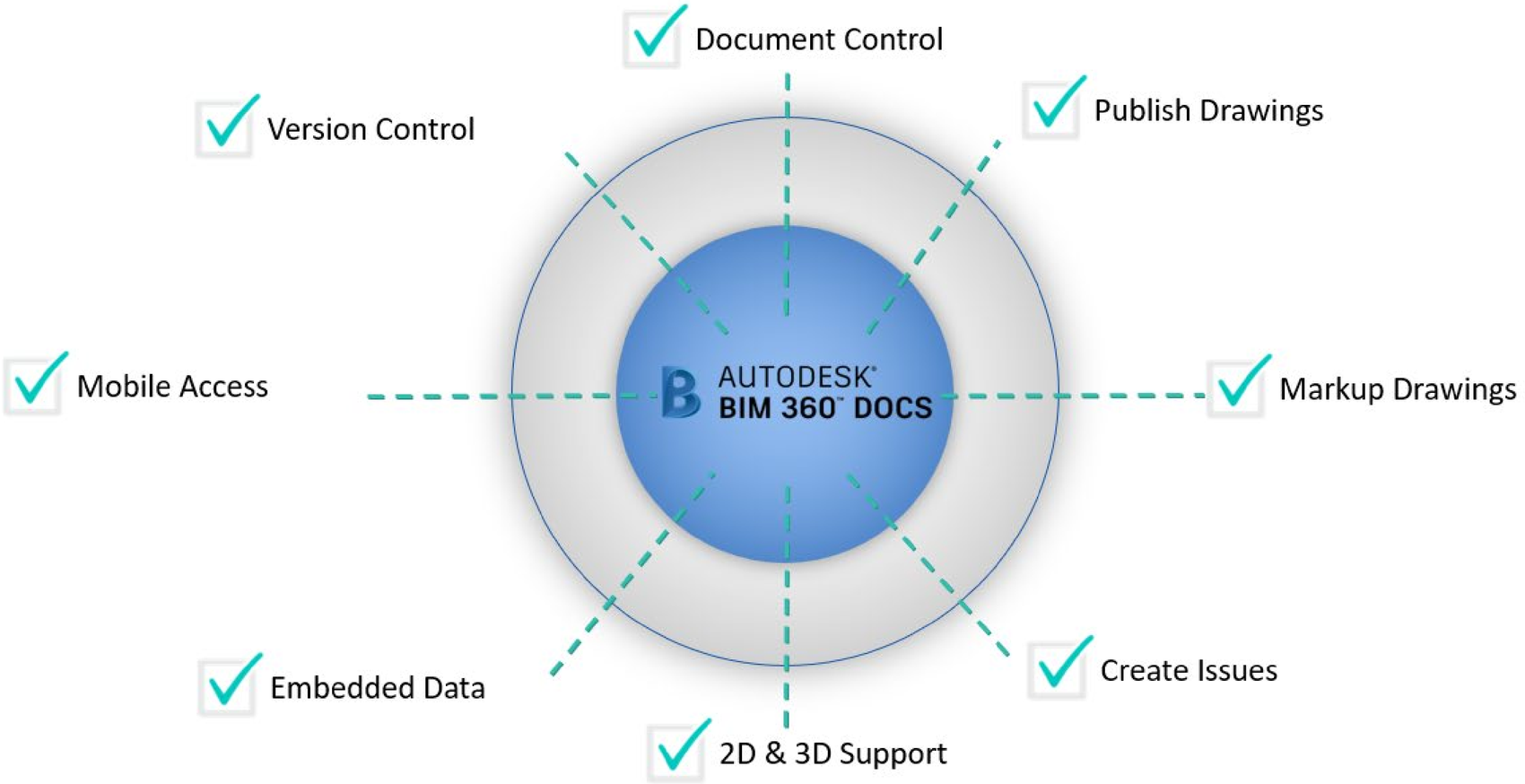
Facade Material Breakdown

Cladding Classification IMC	Takeoff Quantity	Unit Cost	Total Cost	Total Cost Difference	Quantity Difference
Hardie Plank	339,366.66	$0.00	$0.00	$0.00	-12,873.70
Glazing - Windows	84,334.78	$0.00	$0.00	$0.00	2,741.25
Stone	44,874.51	$0.00	$0.00	$0.00	-1,786.31
Stucco	41,404.13	$0.00	$0.00	$0.00	-322.92
Glazing - Doors	34,762.86	$0.00	$0.00	$0.00	1,615.24
Doors	14,927.00	$0.00	$0.00	$0.00	447.00
Glazing - Storefront	6,094.80	$0.00	$0.00	$0.00	-384.81
Total	**565,764.73**	**$0.00**	**$0.00**	**$0.00**	**-72.75**

Quick Look at Assemble



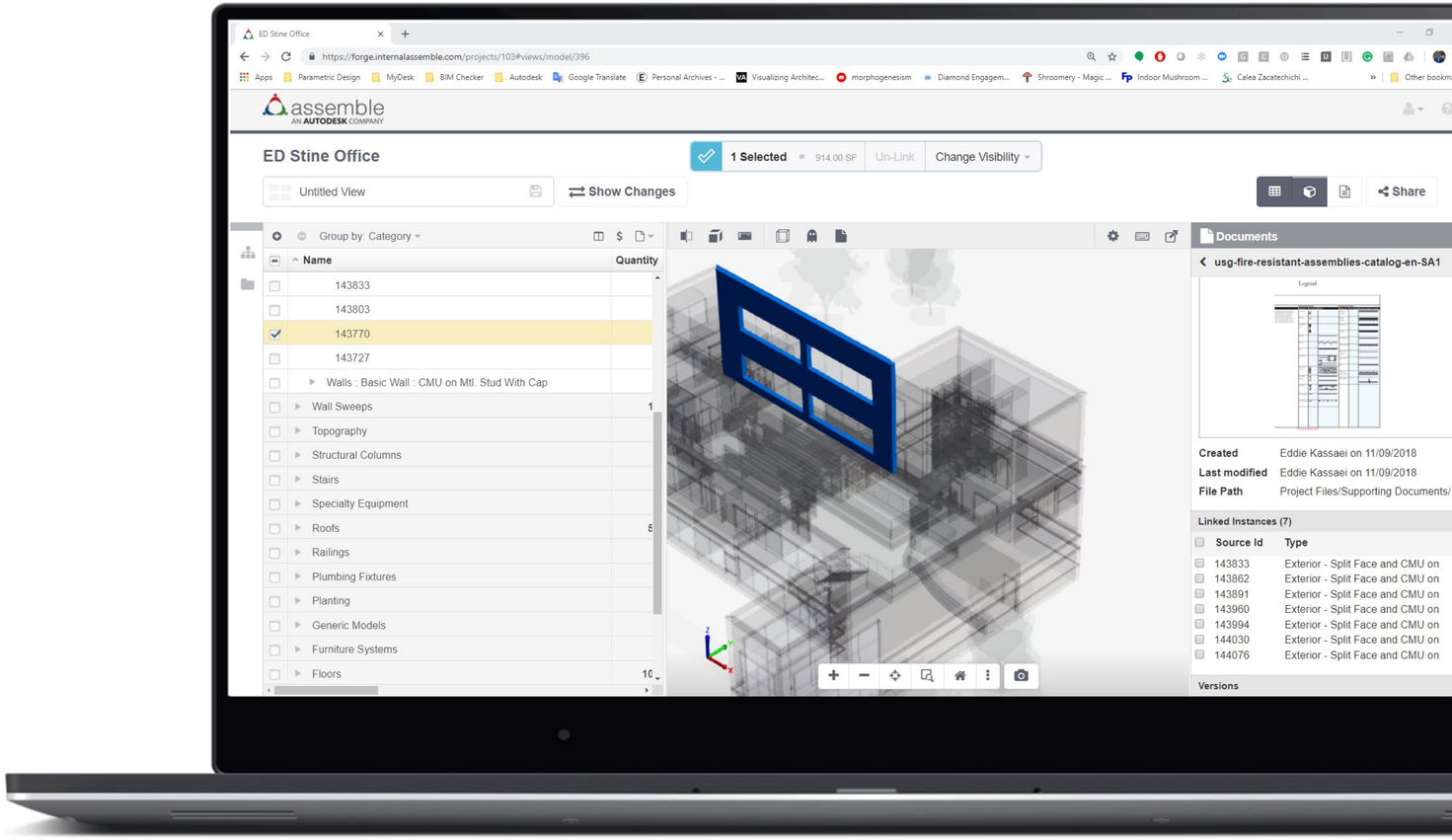
Document Management Workflows with BIM 360 Docs



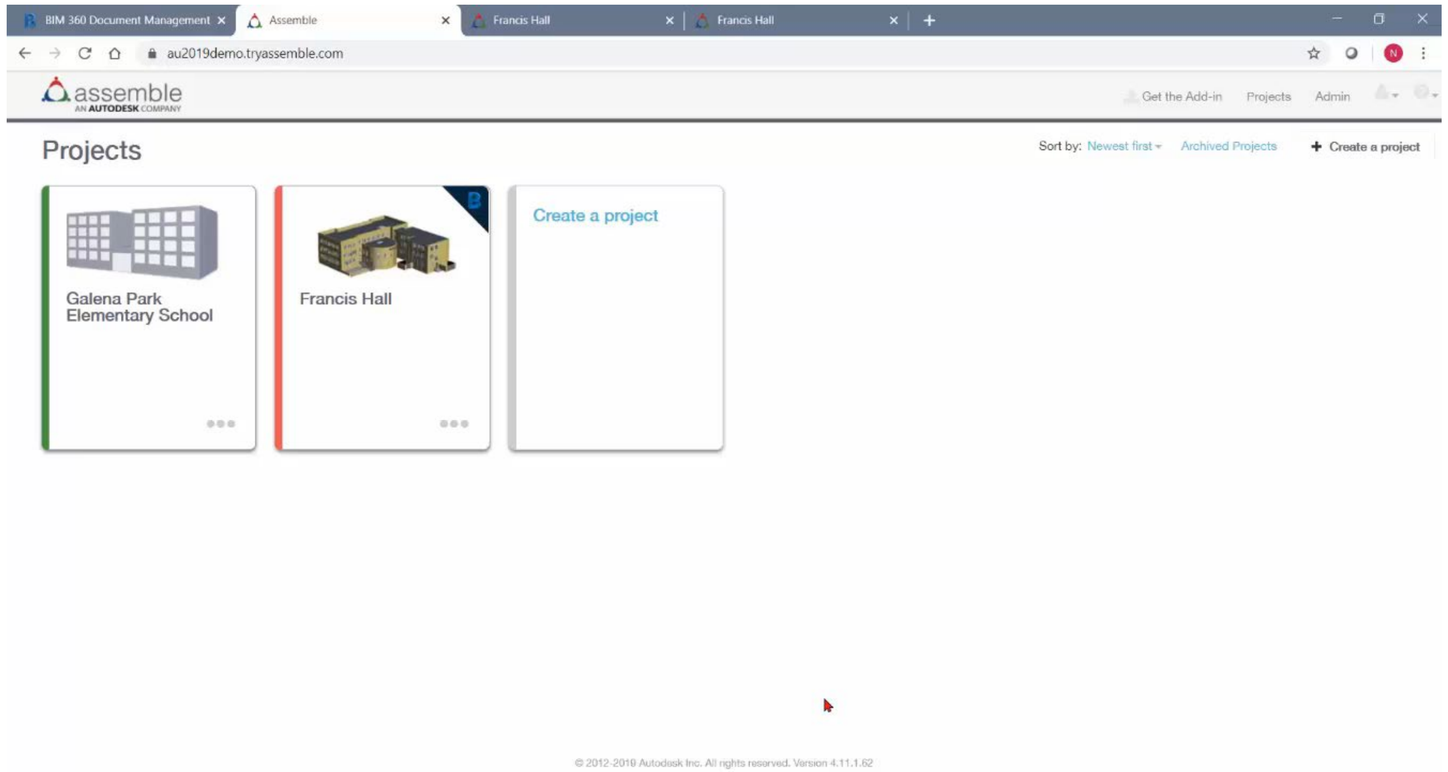
Document Linking

Easily collaborate on the 3D models and supporting documents anywhere and anytime

- Connect BIM360 Docs to Assemble
- BIM 360 permission-based access and version control
- Attach any documents from your BIM360 project folders to different objects in Assemble
- Improved Collaboration



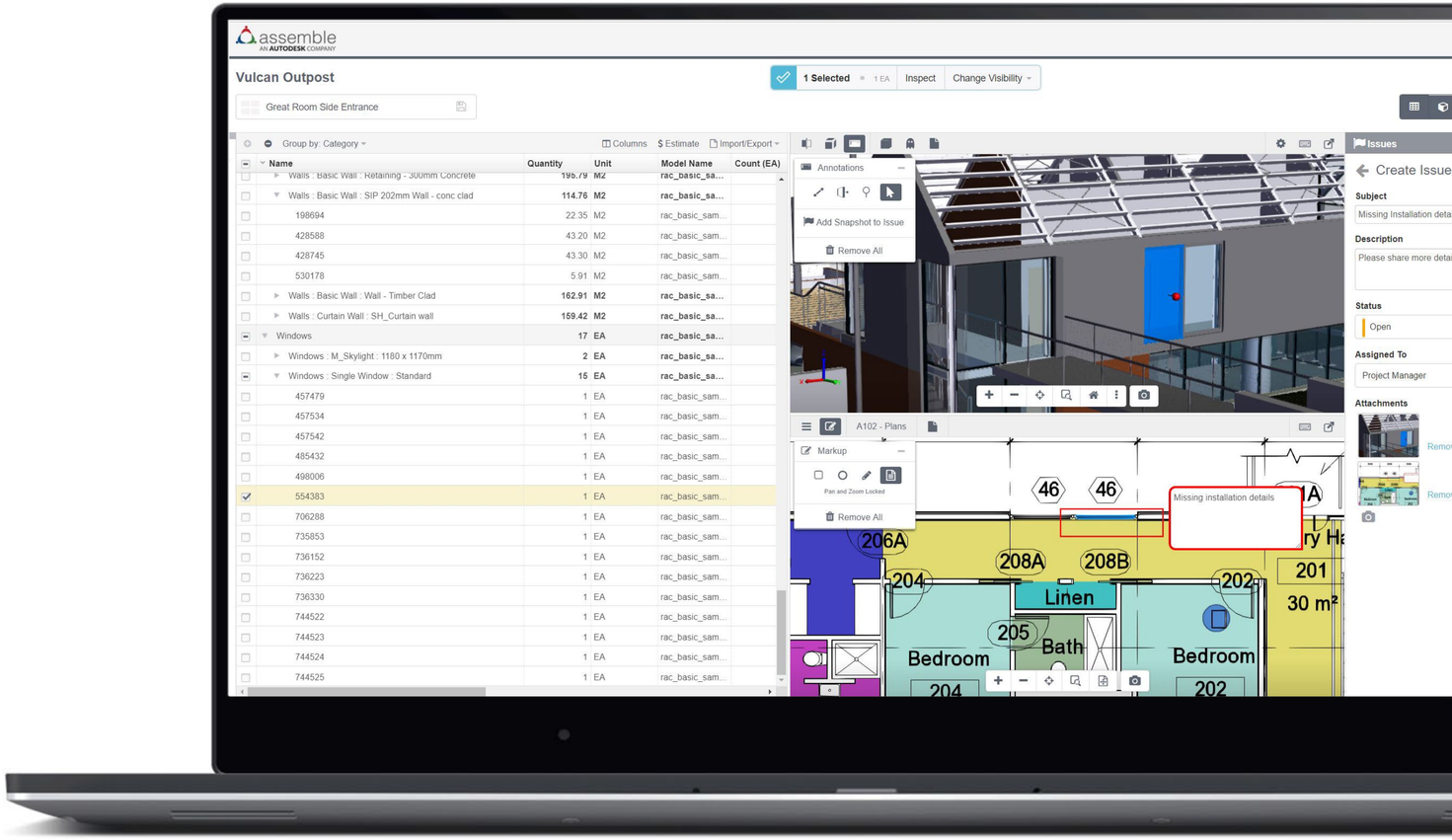
Document Linking



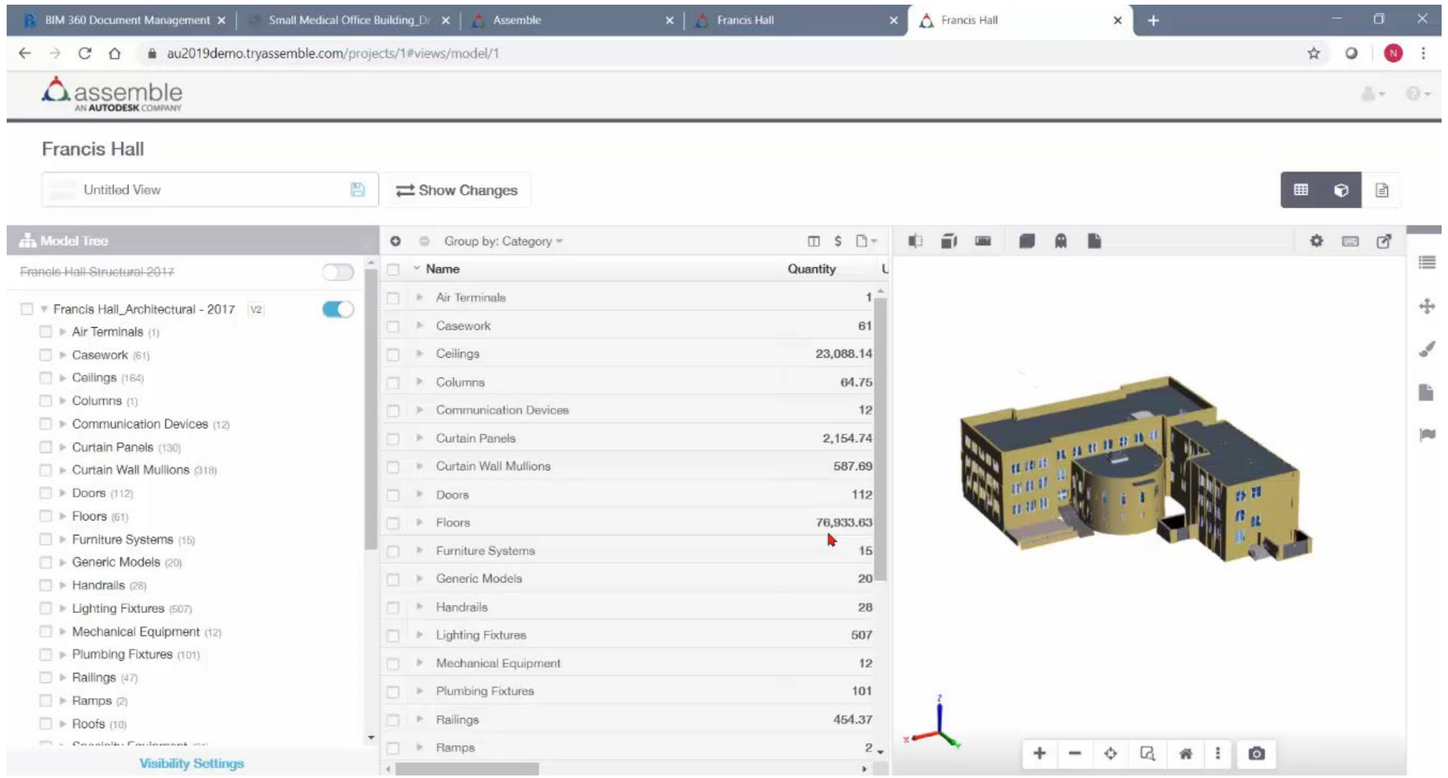
Issue Tracking

Identify, track and resolve project issues through BIM 360 Integration

- Create issues right in Assemble with 3D and 2D snapshots along with mark up capabilities
- Ability to jump into live model or 2D view from the snapshot
- Issues created in Assemble are available in both BIM 360 Issue Management and Assemble Issue panel.
- Increased accountability



Issue Tracking



Q&A

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